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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PECHHOLD, ALEXANDRA K

ART UNIT PAPER NUMBER

3671

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,768

Applicant(s)

KRUGER ET AL.

Examiner

Alexandra K Pechhold

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/26/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 37-40, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols (US 5,401,116).**

Regarding claim 37, Nichols discloses a conduit with an arch shape cross section (see abstract) having a chamber with opposing chamber sidewalls as shown in Fig. 4, and inherently having an inner height, inner width, and major axis along the vertical axis. Judging from the shape shown in Fig. 4, a center point of the major axis would be disposed below the base of the chamber, thereby indicating a truncated shape. The illustration of the conduit depicted in Fig. 4 and the description thereof do not in any manner indicate that the arch shape conduit cannot be a truncated semi-ellipse. The conduit in Fig. 4 is certainly capable of being a truncated semi-ellipse and there is no indication that it is not. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape of the arch shaped conduit of Nichols to be a truncated semi-ellipse, since the drawings illustrate the possibility that the conduit may be a truncated semi-ellipse, and drawings and

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description provide no indication that it could not be or is somehow prevented or incapable of being a truncated semi-ellipse.

Regarding claims 38 and 39, Nichols fails to disclose an inner width to height ratio between about 0.5 to 1 and 2 to 1, or between 1 to 1 and 2 to 1. Nichols does not specify any particular height or width dimension requirements. As applicant indicated in 8/30/02 response, it appears from Fig. 4 of Nichols that the inner width to height ratio is about 2.5, though it is difficult to discern from the perspective view. Yet it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inner height of Nichols to be a little greater, or the inner width to be a little smaller, thereby falling into the claimed range, since the size constraints may be factors of the earth environment in which the conduit it used, and the amount of liquids passing through the conduit. Furthermore, applicant is merely claiming a range "about" a specified criteria, and the ratio of 2.5 in Nichols can be argued to be "about" 2.

Furthermore, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 40, Nichols illustrates an inner height in Fig. 4 that is definitely less than 50% of a major axis, though it is difficult to determine the percentage from the drawing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the inner height of the chamber of Nichols to be about 44 and 48% of the major axis, since the applicant is merely claiming values "about" 44-48%, and furthermore, it has been held that where the general conditions of a claim are

disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 43 and 44, Nichols discloses a double-walled end closure (40) shown in Fig. 11, which is engaged with an end of the chamber as illustrated in Fig. 12.

3. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols (US 5,401,116) as applied to claim 37 above, and further in view of DiTullio (US 5,087,151).

Regarding claim 41, Nichols fails to disclose a support member running upwardly from the outermost edge of each flange. Nichols illustrates an outwardly extending flange running along the base of the opposing sidewalls as illustrated in Fig. 4. DiTullio teaches a support member, seen as the vertical extent (or height) of base portion (26) in Fig. 1, which runs upwardly from the outermost edge of each flange (the flange being the bottom planar surface which Nichols discloses). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flange of Nichols to include a support member running upwardly from the outermost edge of each flange as taught by DiTullio, since DiTullio states in column 4, lines 26-27 that the base portions (26) are designed to support the gallery (10) on the ground. Therefore, greater support at the base (as in more height as opposed to just a thin flange) of the structure can aid in maintaining structural integrity, particularly under heavy loads, which is one of Nichols' desired features (Col 1, lines 48-51).

Regarding claim 42, Nichols fails to disclose connecting elements on each opposing side of the chamber, running transverse to the length of the chamber, from the

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support member to a sidewall of the chamber. DiTullio teaches connecting elements seen as lugs (24) in Fig. 1, which are disposed between ribs (18) and base portion (26). DiTullio states that these lugs (24) allow the gallery (10) to be nested with other similar galleries without firmly locking thereto and facilitate separation thereof (Col 4, lines 20-23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the fluid management system of Nichols to include connecting elements on each opposing side of the chamber, running transverse to the length of the chamber, from the support member to a sidewall of the chamber, as taught by DiTullio, since DiTullio states in column 4, lines 20-23 that such lugs allow the gallery to be nested with other similar galleries without firmly locking thereto and facilitate separation thereof.

4. Claims 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols (US 5,401,116) in view of DiTullio (US 5,087,151).

Regarding claim 45, Nichols discloses the limitations of the claimed invention as discussed in reference to claim 37 above. Furthermore, Fig. 4 of Nichols illustrates the arch shape conduit having a continuous curve, and an outwardly extending flange running along the base of each of the opposing sidewalls. Nichols fails to disclose a support member running upwardly from the outermost edge of each flange. DiTullio teaches a support member, seen as the vertical extent (or height) of base portion (26) in Fig. 1, which runs upwardly from the outermost edge of each flange (the flange being the bottom planar surface which Nichols discloses). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flange of

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Nichols to include a support member running upwardly from the outermost edge of each flange as taught by DiTullio, since DiTullio states in column 4, lines 26-27 that the base portions (26) are designed to support the gallery (10) on the ground. Therefore, greater support at the base (as in more height as opposed to just a thin flange) of the structure can aid in maintaining structural integrity, particularly under heavy loads, which is one of Nichols' desired features (Col 1, lines 48-51).

Regarding claim 46, Nichols fails to disclose a plurality of connecting elements on each opposing side of the chamber, running transverse to the length of the chamber, from the support member to a sidewall of the chamber. DiTullio teaches connecting elements seen as lugs (24) in Fig. 1, which are disposed between ribs (18) and base portion (26). DiTullio states that these lugs (24) allow the gallery (10) to be nested with other similar galleries without firmly locking thereto and facilitate separation thereof (Col 4, lines 20-23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the fluid management system of Nichols to include connecting elements on each opposing side of the chamber, running transverse to the length of the chamber, from the support member to a sidewall of the chamber, as taught by DiTullio, since DiTullio states in column 4, lines 20-23 that such lugs allow the gallery to be nested with other similar galleries without firmly locking thereto and facilitate separation thereof.

Response to Arguments

5. Applicant's arguments and Declaration filed 3/26/03 have been fully considered but they are not persuasive.

Applicant addressed the prior art rejection using the Fouss patent. Since the examiner did not use Fouss in the most recent Office Action (Non-Final Rejection mailed 9/18/02), and solely used Nichols and DiTullio to reject the claims, the examiner is not going to address the applicant's arguments regarding Fouss. Fouss does not apply to the most recent rejection of the claims as they stand.

Applicant focuses on the Nichols reference which illustrates an arched shaped conduit in Fig. 4, without much more specificity in the drawings, claims, or description as to the details of the shape of the conduit. The Declaration from Mr. Nichols likewise supports applicant's argument that Nichols did not provide details of the specifications of the conduit's shape. Applicant argues that the figures in Nichols are not to scale, and the view gives a distorted perspective. Regardless of the lack of detail of the dimensions and shape of the arched conduit in Fig. 4 of Nichols, the claimed shape is entirely capable of being the shape in the figure. The examiner maintains the rejection of the independent claims using Nichols, since the arch shaped conduit of Nichols provides an illustration of a conduit which is entirely capable of being a truncated semi-ellipse, and there is no support in Nichols that the conduit cannot be a truncated semi-ellipse or any details rendering it incapable of being this shape. The figure appears to show the claimed shape, and Nichols provides no indication that Figure 4 cannot be of such shape. Applicant argues also that the shape of the conduit of Nichols is not

necessarily radius-defined. Yet Nichols claims a conduit, and it is well known that conduits are conventionally manufactured as radius-defined structures. By extrapolating the entire shape of the conduit from Fig. 4, it not only appears elliptically, but there is no indication that such a shape could not be employed in the conduit of Nichols, and thereby it is entirely feasible. Nichols provides no teaching away from such a shape.

Applicant argues that DiTullio shows only the flat flange and no support member. But, as claimed, the combination of Nichols and DiTullio meet the claimed recitation. Nichols discloses the flange, which is shown in Fig. 4 as a thin, planar structure. DiTullio teaches a much thicker flange with a substantial height in order to impart structural strength. This upper part, the thickness or height of the flange, is what the examiner is viewing as "a support member running upwardly from the outermost edge of each said flange." DiTullio also has the teaching of a plurality of connecting elements, which are seen as the lugs (24).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexandra Pechhold whose telephone number is (703) 305-0870. The examiner can normally be reached on Mon-Thurs. from 8:00am to 5:30pm and alternating Fridays from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (703)308-3870. The fax phone number for this Group is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.



Thomas B. Will
Supervisory Patent Examiner
Group 3600

AKP
6/13/03